

ABSTRACT

Various techniques for controlling use of configuration data for and/or a design implemented as user logic in a configurable PLD (programmable logic device) include programming the configurable PLD using configuration data provided by a secure device. The programmed configurable PLD includes user logic, a configurable device authorization code generator and a comparator. The user logic is immediately disabled after it is loaded into the configurable device. A configurable device authorization code is generated in the configurable device authorization code generator in the programmed configurable PLD and is sent to the comparator. A secure device authorization code is generated by a secure device authorization code generator and also is sent to the comparator. The comparator compares the two inputs and, if the configurable device authorization code and secure device authorization code are identical, the user logic is then enabled. The configurable device authorization codes and secure device authorization codes may be generated in various ways, including using pseudo-random number generators, encryptors and/or decryptors in combination in the configurable device and the secure device. Various apparatus for implementing the present invention include a secure device configured to generate a secure device signal on which the secure device authorization code is based and a configuration data storage which provides programming instructions for controlling use of configuration data that generates the user logic and required functionalities in the configurable device.

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